ORDER NO. SD82032136C8

Service Manual

Stereo Graphic Equalizer

SH-8065

[EX], [EK], [EF], [XA]

SH-8065(K)

[EX], [EK], [EF], [XA]

Areas

- * [EX] is available in Switzerland and Scandinavia.
- * [EK] is available in United Kingdom.
- * [EF] is available in France.
- * [XA] is available in Southeast Asia, Oceania, Africa, Middle Near East and Central South America.

***The cabinet, front panel and knob are available in black color and silver types.**

***The black type model is provided with (K) in the Service Manual.**

Specifications

Specifications are subject to change without notice for further improvement.
Weights and dimensions shown are approximate.

(DIN 45 500)

Frequency response (center position): 5 Hz~100 kHz, −1 dB

Maximum output voltage: 8 V (1 kHz, THD 0.01%)

Rated output voltage: 1 V

Rated total harmonic distortion: 0.0025% (20 Hz~20 kHz)

Input sensitivity: 1 V

Signal-to-noise ratio: 100 dB (110 dB, IHF' A)

Maximum input voltage: 8 V (1 kHz)

Input impedance: 47 kΩ

Output impedance: 600Ω

Gain: 0±1 dB

Band level controls: +12 dB~−12 dB, +3 dB~−3 dB (33 elements continuously variable per channel)

Signal level selector: 150 mV/1 V

Center frequency: 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz, 50 Hz, 63 Hz, 80 Hz, 100 Hz, 125 Hz, 160 Hz, 200 Hz, 250 Hz, 315 Hz, 400 Hz, 500 Hz, 630 Hz, 800 Hz, 1 kHz, 1.25 kHz, 1.6 kHz, 2 kHz, 2.5 kHz, 3.15 kHz, 4 kHz, 5 kHz, 6.3 kHz, 8 kHz, 10 kHz, 12.5 kHz, 16 kHz, 20 kHz, 25 kHz

GENERAL

Power supply: AC 110 V/120 V/220 V/240 V, 50 Hz/60 Hz

Power consumption: 29 W

Dimensions (H×W×D): 153×430×330 mm (6-1/32''×16-15/16''×13'')

Weight: 6.6 kg (14.6 lbs)

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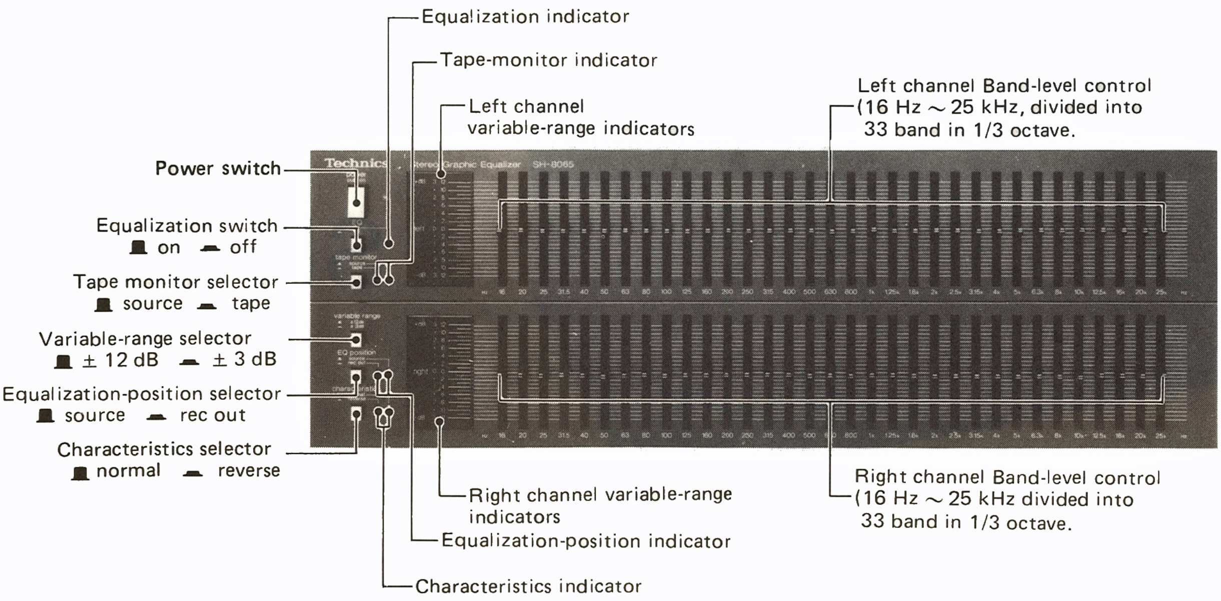
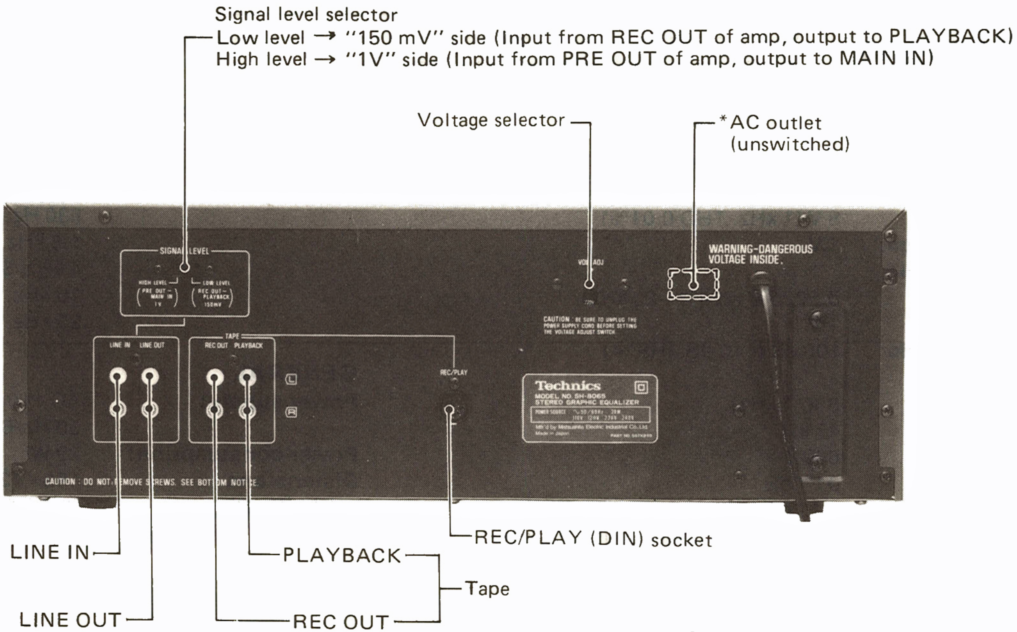
Technics

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

■ LOCATION OF CONTROLS


Equalization indicator
Tape-monitor indicator
Left channel variable-range indicators
Left channel Band-level control (16 Hz ~ 25 kHz, divided into 33 band in 1/3 octave.
Power switch
Equalization switch
■ on ▬ off
Tape monitor selector
■ source ▬ tape
Variable-range selector
■ ± 12 dB ▬ ± 3 dB
Equalization-position selector
■ source ▬ rec out
Characteristics selector
■ normal ▬ reverse
Technics
Stereo Graphic Equalizer SH-8065
Right channel variable-range indicators
Equalization-position indicator
Characteristics indicator
Right channel Band-level control (16 Hz ~ 25 kHz divided into 33 band in 1/3 octave.


Signal level selector
Low level → "150 mV" side (Input from REC OUT of amp, output to PLAYBACK)
High level → "1V" side (Input from PRE OUT of amp, output to MAIN IN)
Voltage selector
*AC outlet (unswitched)
SIGNAL LEVEL
HIGH LEVEL
LOW LEVEL
LINE IN
LINE OUT
TAPE
REC OUT
PLAYBACK
REC/PLAY
WARNING-DANGEROUS VOLTAGE INSIDE.
Technics
CAUTION : DO NOT REMOVE SCREWS. SEE BOTTOM NOTICE
LINE IN
LINE OUT
PLAYBACK
REC OUT
Tape
REC/PLAY (DIN) socket

* [XA] area is provided with AC outlet.

● Switches

Equalization switch (EQ)

This switch can be used to turn the equalization circuitry on and off.

on: Set to this position for equalizer correction.

off: Set to this position to turn off equalizer correction. By turning this switch on and off, the equalizer effect can also be checked. When this switch is in the "off" position, signals will still pass through the unit and be emitted, regardless of whether the power switch is in the "on" or "off" position.

Tape-monitor selector (tape monitor)

source: Set to this position to listen to the radio or a disc.
tape: Set to this position to listen to a tape deck.

Note:

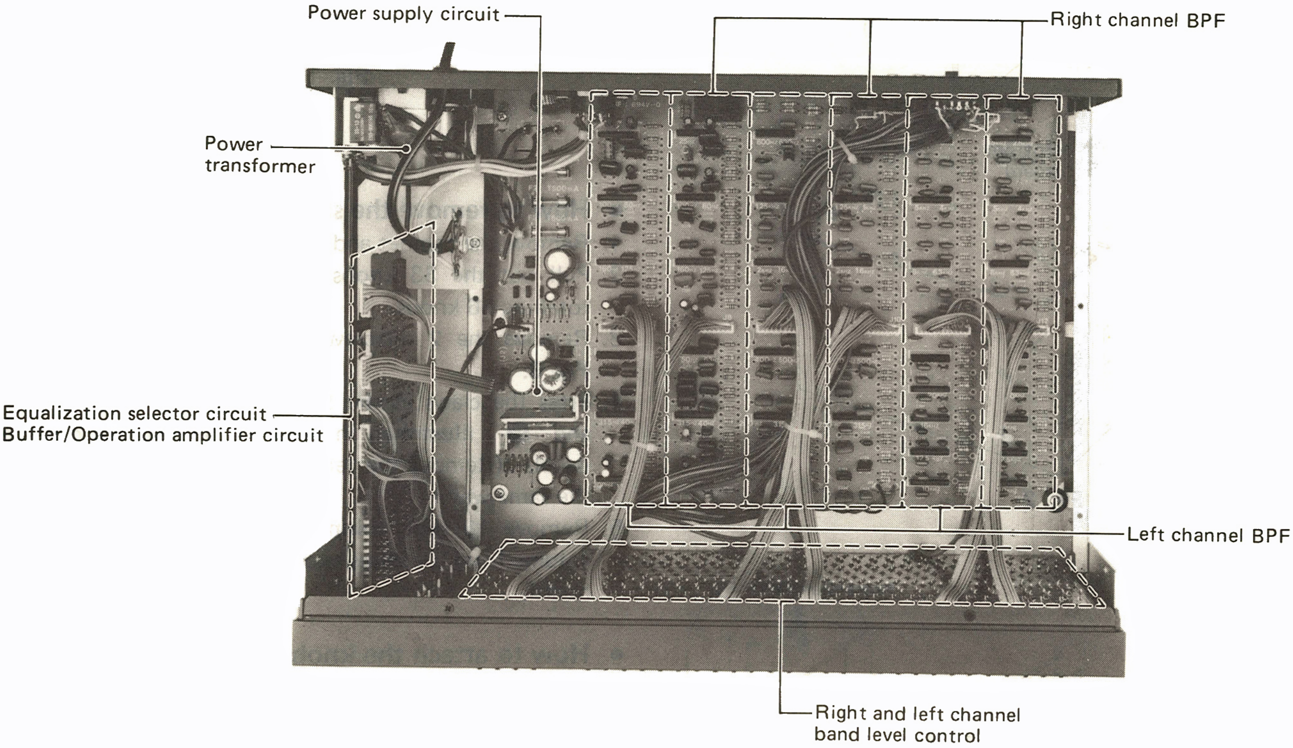
If the equalization-position selector is set to the "source" position and the equalization switch is set to the "on" position, the frequency response of the radio, disc and tape deck can be controlled.

Equalization-position selector (EQ position)

source: Set to this position to record without equalizer correction.
rec out: Set to this position in order to make a tape recording of a radio broadcast or a disc while controlling the frequency response. Also, compensated playback sound can be heard at this position.

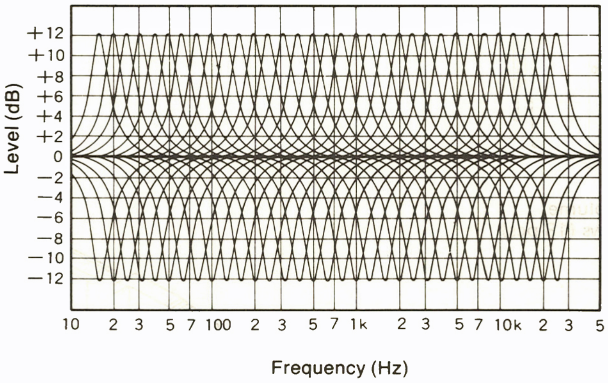
Note:

The equalization switch must be set to the "on" position, otherwise the frequency response cannot be controlled.


Power supply circuit
Right channel BPF
Power transformer
Equalization selector circuit
Buffer/Operation amplifier circuit
Left channel BPF
Right and left channel band level control

■ TOTAL FREQUENCY RESPONSE

Frequency response (± 12 dB position)



■ DISASSEMBLY INSTRUCTIONS

● How to remove the front panel

1. Remove setscrews ❶ ~ ❾ in **Fig. 1** to remove the cabinet.
2. Remove 5 setscrews of the front panel **(Fig. 1)**.
3. Pull out the connectors J3 and J4 from the switch printed circuit board on the left side.
4. Remove the front panel with care not to damage the knob.

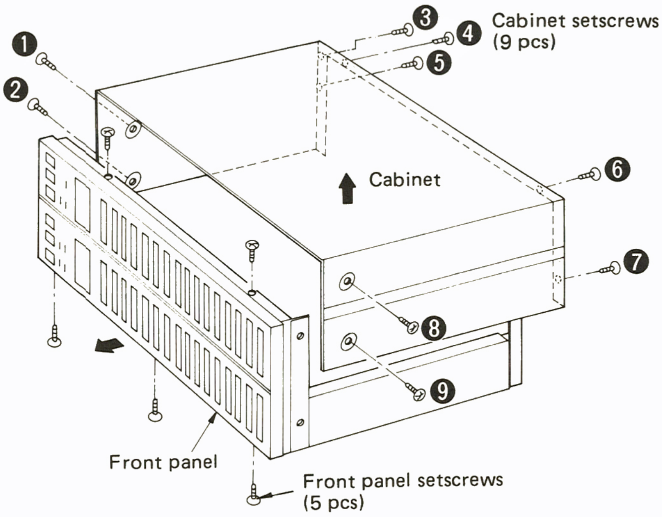

❶
❷
❸
❹
❺
Cabinet setscrews (9 pcs)
Cabinet
❻
❼
❽
❾
Front panel
Front panel setscrews (5 pcs)

Fig. 1

● How to remove the bottom board

1. Remove 9 setscrews as in **Fig. 2** and remove the bottom board.

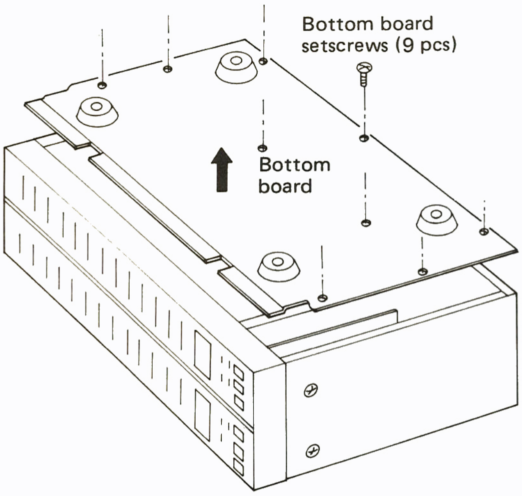

Bottom board setscrews (9 pcs)
Bottom board

Fig. 2

● How to remove the slide volume

1. Remove the cabinet and front panel.
2. Pull out the 33 knobs of the right and left channels, totalling 66 knobs.
3. Remove the 2 setscrews of the ornament panel as in **Fig. 3**.
4. Press the claws at the top of the ornament panel (Ⓐ and Ⓑ) illustrated in order to remove the ornament panel. (Remove the remaining two ornament panels in the same way.)
5. Remove 18 slide volume setscrews to catch the slide volume from the chassis together with the printed circuit board.

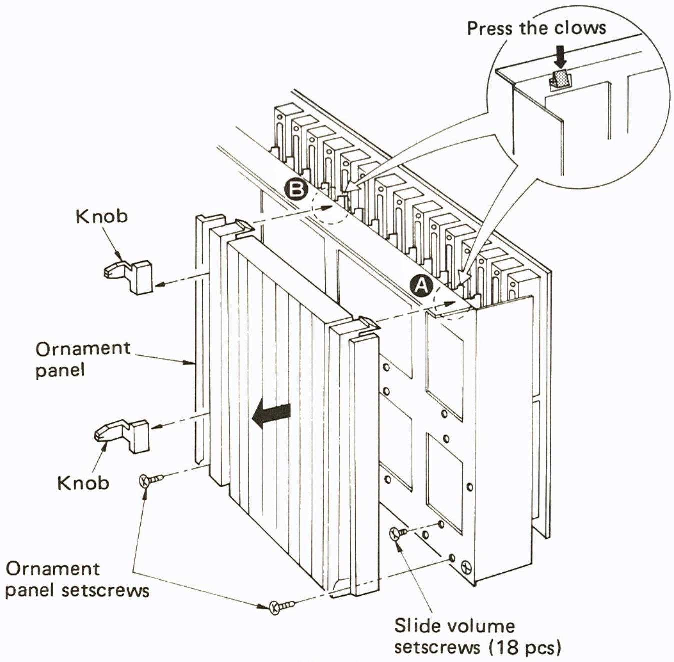

Press the clows
Ⓑ
Ⓐ
Knob
Ornament panel
Knob
Ornament panel setscrews
Slide volume setscrews (18 pcs)

Fig. 3

● How to attach the knobs

Insert the top (left channel) volume lever into the lower hole of the knob, and the bottom (right channel) lever into the upper hole, as shown in **Fig. 4**.

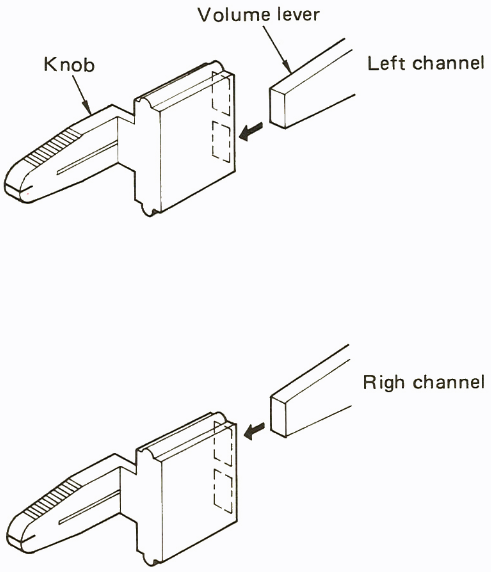

Volume lever
Knob
Left channel
Righ channel

Fig. 4

■ REPLACEMENT PARTS LIST

• Resistors and Capacitors

Notes:
1. Part numbers are indicated on most mechanical parts. Please this part number for parts orders.
2. Important safety notice:
   Components identified by ⚠ mark have special characteristics important for safety.
   When replacing any of these components use only manufacturer's specified parts.
3. The "**S**" mark is service standard parts and may differ from production parts.

Numbering System of Resistor

Example

ERD	25	F	J	101
Type	Wattage (1/4W)	Shape	Tolerance	Value
	50			
	Wattage (1/2W)			

Numbering System of Capacitor

Example

ECKD	1H	102	K	D
Type	Voltage	Value (0.001μF)	Tolerance	Peculiarity

ECEA	50	M	R47	R
Type	Voltage (50V)	Peculiarity use	Value (0.47μF)	Special use

Capacitor Type		Voltage		Tolerance
		ECEA Type	Others	
ECEA	: Electrolytic	1A : 10V	1H : 50VDC	C : ± 0.25pF
ECEA. . . . N	: Non Polar Electrolytic	1C : 16V	1 : 125VDC	J : ± 5%
ECCD	: Ceramic	1E : 25V	KC : 400VAC	K : ± 10%
ECKD	: Ceramic	25Z : 25V		Z : +80%, –20%
ECQM	: Polyester	1V : 35V		P : +100%, –0%
ECQE	: Polyester	1H : 50V		
		50M : 50V		

Ref. No.			Part No.	Value
RESISTORS				
R1, 2		S	ERD25FJ222	2.2kΩ
R3, 4		S	ERD25TJ104	100kΩ
R5, 6		S	ERD25FJ822	8.2kΩ
R7, 8		S	ERD25FJ332	3.3kΩ
R9, 10		S	ERD25TJ224	220kΩ
R11, 12		S	ERD25TJ224	220kΩ
R13, 14		S	ERD25FJ822	8.2kΩ
R15, 16		S	ERD25FJ332	3.3kΩ
R17, 18		S	ERD25FJ102	1kΩ
R19, 20		S	ERD25FJ222	2.2kΩ
R21, 22		S	ERD25TJ333	33kΩ
R23, 24		S	ERD25TJ104	100kΩ
R25, 26		S	ERD25TJ104	100kΩ
R27, 28		S	ERD25TJ104	100kΩ
R29 30		S	ERD25TJ394	390kΩ
R31, 32		S	ERD25FJ472	4.7kΩ
R33, 34		S	ERD25TJ824	820kΩ
R35, 36		S	ERD25FJ472	4.7kΩ
R37, 38		S	ERD25FJ331	330Ω
R39		S	ERD25FJ331	330Ω
R40, 41		S	ERD25FJ561	560Ω
R42, 43		S	ERD25FJ561	560Ω
R50		S	ERD25TJ153	15kΩ
R51		S	ERD25TJ223	22kΩ
R52		S	ERD25TJ683	68kΩ
R53		S	ERD25TJ224	220kΩ
R54		S	ERD25TJ333	33kΩ
R55		S	ERD25TJ223	22kΩ
R56		S	ERD25FJ562	5.6kΩ
R57	⚠	S	ERD50FJ681	680Ω
R58, 59	⚠	S	ERD25FJ4R7	4.7Ω
R60, 61	⚠	S	ERD25FJ2R2	2.2Ω
R62	⚠	S	ERD25FJ2R2	2.2Ω
R81, 82		S	ERD25FJ272	2.7kΩ
R83, 84		S	ERD25FJ821	820Ω
R85, 86		S	ERD25FJ682	6.8kΩ
R87, 88		S	ERD25TJ123	12kΩ
R89, 90		S	ERD25FJ222	2.2kΩ
R91, 92		S	ERD25FJ152	1.5kΩ
R93, 94		S	ERD25FJ152	1.5kΩ
R101, 102		S	ERD25FJ680	68Ω
R103, 104		S	ERD25FJ680	68Ω
R105, 106		S	ERD25FJ680	68Ω
R107, 108		S	ERD25FJ680	68Ω
R109, 110		S	ERD25FJ151	150Ω
R111, 112		S	ERD25FJ181	180Ω
R113, 114		S	ERD25FJ680	68Ω
R115, 116		S	ERD25FJ101	100Ω
R117, 118		S	ERD25FJ680	68Ω
R119, 120		S	ERD25FJ680	68Ω
R121, 122		S	ERD25FJ101	100Ω
R123, 124		S	ERD25FJ151	150Ω
R125, 126		S	ERD25FJ680	68Ω
R127, 128		S	ERD25FJ101	100Ω
R129, 130		S	ERD25FJ680	68Ω
R131, 132		S	ERD25FJ101	100Ω
R133, 134		S	ERD25FJ101	100Ω
R135, 136		S	ERD25FJ680	68Ω
R137, 138		S	ERD25FJ101	100Ω
R139, 140		S	ERD25FJ680	68Ω
R141, 142		S	ERD25FJ680	68Ω
R143, 144		S	ERD25FJ680	68Ω
R145, 146		S	ERD25FJ181	180Ω
R147, 148		S	ERD25FJ151	150Ω
R149, 150		S	ERD25FJ181	180Ω
R151, 152		S	ERD25FJ101	100Ω
R153, 154		S	ERD25FJ151	150Ω
R155, 156		S	ERD25FJ680	68Ω
R157, 158		S	ERD25FJ680	68Ω
R159, 160		S	ERD25FJ221	220Ω
R161, 162		S	ERD25FJ221	220Ω
R163, 164		S	ERD25FJ151	150Ω
R165, 166		S	ERD25FJ151	150Ω
R201, 202		S	ERD25FJ391	390Ω
R203, 204		S	ERD25FJ391	390Ω
R205, 206		S	ERD25FJ391	390Ω
R207, 208		S	ERD25FJ391	390Ω
R209, 210		S	ERD25FJ471	470Ω
R211, 212		S	ERD25FJ391	390Ω
R213, 214		S	ERD25FJ471	470Ω
R215, 216		S	ERD25FJ471	470Ω
R217, 218		S	ERD25FJ471	470Ω
R219, 220		S	ERD25FJ471	470Ω
R221, 222		S	ERD25FJ471	470Ω
R223, 224		S	ERD25FJ471	470Ω
R225, 226		S	ERD25FJ471	470Ω
R227, 228		S	ERD25FJ471	470Ω
R229, 230		S	ERD25FJ471	470Ω
R231, 232		S	ERD25FJ471	470Ω
R233, 234		S	ERD25FJ471	470Ω
R235, 236		S	ERD25FJ471	470Ω
R237, 238		S	ERD25FJ471	470Ω
R239, 240		S	ERD25FJ471	470Ω
R241, 242		S	ERD25FJ471	470Ω
R243, 244		S	ERD25FJ471	470Ω
R245, 246		S	ERD25FJ391	390Ω
R247, 248		S	ERD25FJ391	390Ω
R249, 250		S	ERD25FJ391	390Ω
R251, 252		S	ERD25FJ391	390Ω
R253, 254		S	ERD25FJ391	390Ω
R255, 256		S	ERD25FJ391	390Ω
R257, 258		S	ERD25FJ471	470Ω
R259, 260		S	ERD25FJ471	470Ω
R261, 262		S	ERD25FJ471	470Ω
R263, 264		S	ERD25FJ471	470Ω
R265, 266		S	ERD25FJ471	470Ω
R301, 302		S	ERD25TJ823	82kΩ
R303, 304		S	ERD25TJ104	100kΩ
R305, 306		S	ERD25TJ104	100kΩ
R307, 308		S	ERD25TJ104	100kΩ
R309, 310		S	ERD25TJ104	100kΩ
R311, 312		S	ERD25TJ124	120kΩ
R313, 314		S	ERD25TJ104	100kΩ
R315, 316		S	ERD25TJ124	120kΩ
R317, 318		S	ERD25TJ104	100kΩ
R319, 320		S	ERD25TJ104	100kΩ
R321, 322		S	ERD25TJ104	100kΩ
R323, 324		S	ERD25TJ104	100kΩ
R325, 326		S	ERD25TJ104	100kΩ
R327, 328		S	ERD25TJ124	120kΩ
R329, 330		S	ERD25TJ104	100kΩ
R331, 332		S	ERD25TJ104	100kΩ
R333, 334		S	ERD25TJ104	100kΩ
R335, 336		S	ERD25TJ104	100kΩ
R337, 338		S	ERD25TJ104	100kΩ
R339, 340		S	ERD25TJ104	100kΩ
R341, 342		S	ERD25TJ104	100kΩ
R343, 344		S	ERD25TJ104	100kΩ
R345, 346		S	ERD25TJ104	100kΩ
R347, 348		S	ERD25TJ104	100kΩ
R349, 350		S	ERD25TJ104	100kΩ
R351, 352		S	ERD25TJ104	100kΩ
R353, 354		S	ERD25TJ104	100kΩ
R355, 356		S	ERD25TJ104	100kΩ
R357, 358		S	ERD25TJ104	100kΩ
R359, 360		S	ERD25FJ103	10kΩ
R361, 362		S	ERD25FJ103	10kΩ
R363, 364		S	ERD25FJ103	10kΩ
R365, 366		S	ERD25FJ103	10kΩ

Ref. No.	Part No.	Value
CAPACITORS		
C1, 2 **S**	ECEA25Z4R7	4.7μF
C3, 4 **S**	ECCD1H818K	180pF
C5, 6 **S**	ECEA1ES470	47μF
C7, 8 **S**	ECEA1ES470	47μF
C9, 10 **S**	ECCD1H121KC	120pF
C11, 12 **S**	ECQM1H102JZ	0.001μF
C13, 14 **S**	ECEA1ES470	47μF
C50, 51 **S**	ECKD1H223ZF	0.022μF
C52 **S**	ECEA1CS222	2200μF
C53 **S**	ECEA1AS101	100μF
C54 **S**	ECEA1AS221	220μF
C55, 56 **S**	ECKD1H223ZF	0.022μF
C57, 58 **S**	ECEA1VS102	1000μF
C59, 60 **S**	ECEA1ES221	220μF
C61, 62 **S**	ECQM1H473JZ	0.047μF
C63, 64 **S**	ECEA1ES101	100μF
C65, 66 **S**	ECEA1ES221	220μF
C67, 68 **S**	ECEA1HS100	10μF
C69, 70 **S**	ECEA1HS100	10μF
C71, 72 **S**	ECKD1H223ZF	0.022μF
C73, 74 **S**	ECKD1H223ZF	0.022μF
C75, 76 **S**	ECKD1H223ZF	0.022μF
C77, 78 **S**	ECKD1H223ZF	0.022μF
C79 **S**	ECEA1AS102	1000μF
C81, 82 **S**	ECEA1VS330	33μF
C101, 102 ⚠	ECEA1HN2R2S	2.2μF
C103, 104 ⚠	ECEA1HN010S	1μF
C105, 106 ⚠	ECEA1HN010S	1μF
C107, 108 ⚠	ECEA1HN010S	1μF
C109, 110	ECQE1474KZ	0.47μF
C111, 112	ECQE1334KZ	0.33μF
C113, 114	ECQE1474KZ	0.47μF
C115, 116	ECQE1334KZ	0.33μF
C117, 118	ECQE1334KZ	0.33μF
C119, 120	ECQE1274KZ	0.27μF
C121, 122	ECQE1224KZ	0.22μF
C123, 124	ECQE1184KZ	0.18μF
C125, 126	ECQE1124KZ	0.12μF
C127, 128 **S**	ECQM1H104JZ	0.1μF
C129, 130 **S**	ECQM1H823JZ	0.082μF
C131, 132 **S**	ECQM1H683JZ	0.068μF
C133, 134 **S**	ECQM1H563JZ	0.056μF
C135, 136 **S**	ECQM1H393JZ	0.039μF
C137, 138 **S**	ECQM1H333JZ	0.033μF
C139, 140 **S**	ECQM1H273JZ	0.027μF
C141, 142 **S**	ECQM1H223JZ	0.022μF
C143, 144 **S**	ECQM1H183JZ	0.018μF
C145, 146 **S**	ECQM1H153JZ	0.015μF
C147, 148 **S**	ECQM1H123JZ	0.012μF
C149, 150 **S**	ECQM1H103JZ	0.01μF
C151, 152 **S**	ECQM1H682JZ	0.0068μF
C153, 154 **S**	ECQM1H682JZ	0.0068μF
C155, 156 **S**	ECQM1H472JZ	0.0047μF
C157, 158 **S**	ECQM1H332JZ	0.0033μF
C159, 160 **S**	ECQM1H332JZ	0.0033μF
C161, 162 **S**	ECQM1H182JZ	0.0018μF
C163, 164 **S**	ECQM1H122JZ	0.0012μF
C165, 166 **S**	ECQM1H122JZ	0.0012μF
C201, 202 **S**	ECEA50Z1	1μF
C203, 204	ECQE1474KZ	0.47μF
C205, 206 **S**	ECEA50MR68R	0.68μF
C207, 208 **S**	ECEA50ZR47	0.47μF
C209, 210	ECQE1334KZ	0.33μF
C211, 212	ECQE1334KZ	0.33μF
C213, 214	ECQE1274KZ	0.27μF
C215, 216	ECQE1184KZ	0.18μF
C217, 218	ECQE1154KZ	0.15μF
C219, 220	ECQE1124KZ	0.12μF
C221, 222 **S**	ECQM1H104JZ	0.1μF
C223, 224 **S**	ECQM1H683JZ	0.068μF
C225, 226 **S**	ECQM1H683JZ	0.068μF
C227, 228 **S**	ECQM1H473JZ	0.047μF
C229, 230 **S**	ECQM1H393JZ	0.039μF
C231, 232 **S**	ECQM1H333JZ	0.033μF
C233, 234 **S**	ECQM1H223JZ	0.022μF
C235, 236 **S**	ECQM1H223JZ	0.022μF
C237, 238 **S**	ECQM1H153JZ	0.015μF
C239, 240 **S**	ECQM1H123JZ	0.012μF
C241, 242 **S**	ECQM1H103JZ	0.01μF
C243, 244 **S**	ECQM1H682JZ	0.0068μF
C245, 246 **S**	ECQM1H682JZ	0.0068μF
C247, 248 **S**	ECQM1H562JZ	0.0056μF
C249, 250 **S**	ECQM1H332JZ	0.0033μF
C251, 252 **S**	ECQM1H332JZ	0.0033μF
C253, 254 **S**	ECQM1H222JZ	0.0022μF
C255, 256 **S**	ECQM1H222JZ	0.0022μF
C257, 258 **S**	ECQM1H152JZ	0.0015μF
C259, 260 **S**	ECQM1H103JZ	0.01μF
C261, 262 **S**	ECQM1H103JZ	0.01μF
C263, 264 **S**	ECQM1H822JZ	0.0082μF
C265, 266 **S**	ECQM1H682JZ	0.0068μF
C301, 302 **S**	ECEA50MR68R	0.68μF
C303, 304 ⚠	ECEA1HN010S	1μF
C305, 306 **S**	ECQE1474KZ	0.47μF
C307, 308 **S**	ECQE1274KZ	0.27μF
C309, 310 **S**	ECQE1474KZ	0.47μF
C311, 312 **S**	ECQE1334KZ	0.33μF
C315, 316 **S**	ECQM1H473JZ	0.047μF
C349, 350 **S**	ECQM1H122JZ	0.0012μF
C351, 352 **S**	ECQM1H102JZ	0.001μF
C357, 358 **S**	ECKD1H331KB	330pF
C361, 362 **S**	ECKD1H331KB	330pF
C363, 364 **S**	ECKD1H391KB	390pF
C403, 404 **S**	ECQE1334KZ	0.33μF
C409, 410 **S**	ECQM1H223JZ	0.022μF
C413, 414 **S**	ECQM1H273JZ	0.027μF
C417, 418 **S**	ECQM1H153JZ	0.015μF
C419, 420 **S**	ECQM1H153JZ	0.015μF
C423, 424 **S**	ECQM1H822JZ	0.0082μF
C425, 426 **S**	ECQM1H682JZ	0.0068μF
C429, 430 **S**	ECQM1H332JZ	0.0033μF
C433, 434 **S**	ECQM1H182JZ	0.0018μF
C437, 438 **S**	ECQM1H222JZ	0.0022μF
C439, 440 **S**	ECQM1H122JZ	0.0012μF
C443, 444 **S**	ECKD1H391KB	390pF
C449, 450 **S**	ECKD1H331KB	330pF
C453, 454 **S**	ECKD1H221KB	220pF
C459, 460 **S**	ECKD1H331KB	330pF
C465, 466 **S**	ECKD1H391KB	390pF
C1001 ⚠	ECKDKC103PF	0.01μF

Electrical Parts

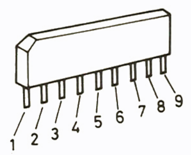
Notes:
1. Part numbers are indicated on most mechanical parts. Please this part number for parts orders.
2. Important safety notice:
   Components identified by ⚠ mark have special characteristics important for safety.
   When replacing any of these components use only manufacturer's specified parts.
3. The "**S**" mark is service standard parts and may differ from production parts.

Ref. No.	Part No.	Description
INTEGRATED CIRCUITS		
IC1 ~ 38	SVINJM2043SD	Band Pass Filter
IC101, 102	SVINJM2043DD	Operation Amplifier
IC103	SVIL78M20	Regulator, ⊕B Voltage
IC104	SVIUPC7918H	Regulator, ⊖B Voltage
TRANSISTORS		
Q1, 3	2SB745–S	Switching
Q2	2SD636	Switching
DIODES		
D1, 2 ⚠	SVD1B4B42	Rectifier
D3, 4 **S**	MA162A	Rectifier & Pulse Killer
D5, 7, 9, 11	LN824WP	Switch Position Indicator
D6, 8, 10	LN424WP	Switch Position Indicator
D13	SVD05Z3.0F–3	Zener, 3V
VARIABLE RESISTOR		
VR1 ~ 66	EVAD02C15G25	Band Level Control, 200kΩ (G)
TRANSFORMER		
T1 ⚠	SLTK5L6–Z	Power Source
COIL		
L1 ⚠	SLQK3	Choke
LAMP		
PL1 ~ 4 ⚠	XAMR81S10	Range Indicator, 8V, 0.15A
RELAY		
RLY1	SSY9	Muting
SWITCHES		
S1, 5	SSHK19	Equalizer, Tape Monitor
S2 ~ 4	SSHK20	EQ Position, Characteristics Variable Range
S6	SSSK5	Input Signal Level
S7 ⚠	ESB90619S	Power
S8 ⚠	ESE3787	Voltage Selector
FUSES		
F1 ~ 3 ⚠	XBA2C05TR0	250V, T 500mA

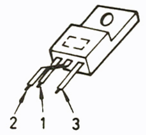
■ PRINTED CIRCUIT BOARDS

- **Terminal guide of transistors, IC's and diodes**

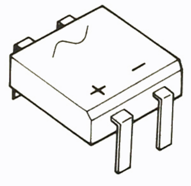
SVINJM2043SD



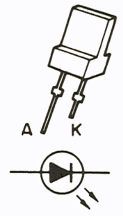
SVIL78M20
SVIμPC7918H



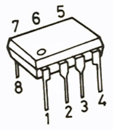
SVD1B4B42



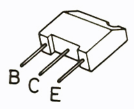
LN424WP, LN824WP



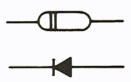
SVINJM2043DD



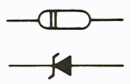
2SB745, 2SD636



MA150



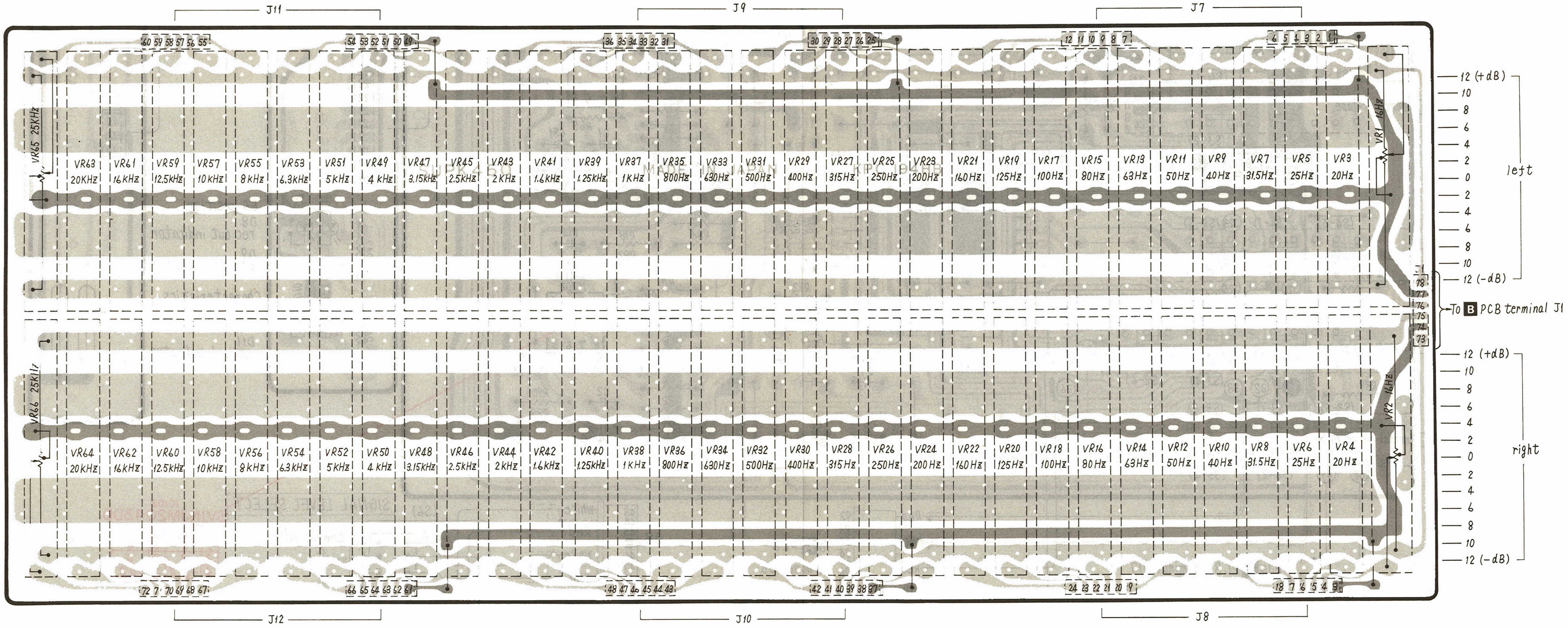
SVD05Z3.0F-3



C P.C.B.

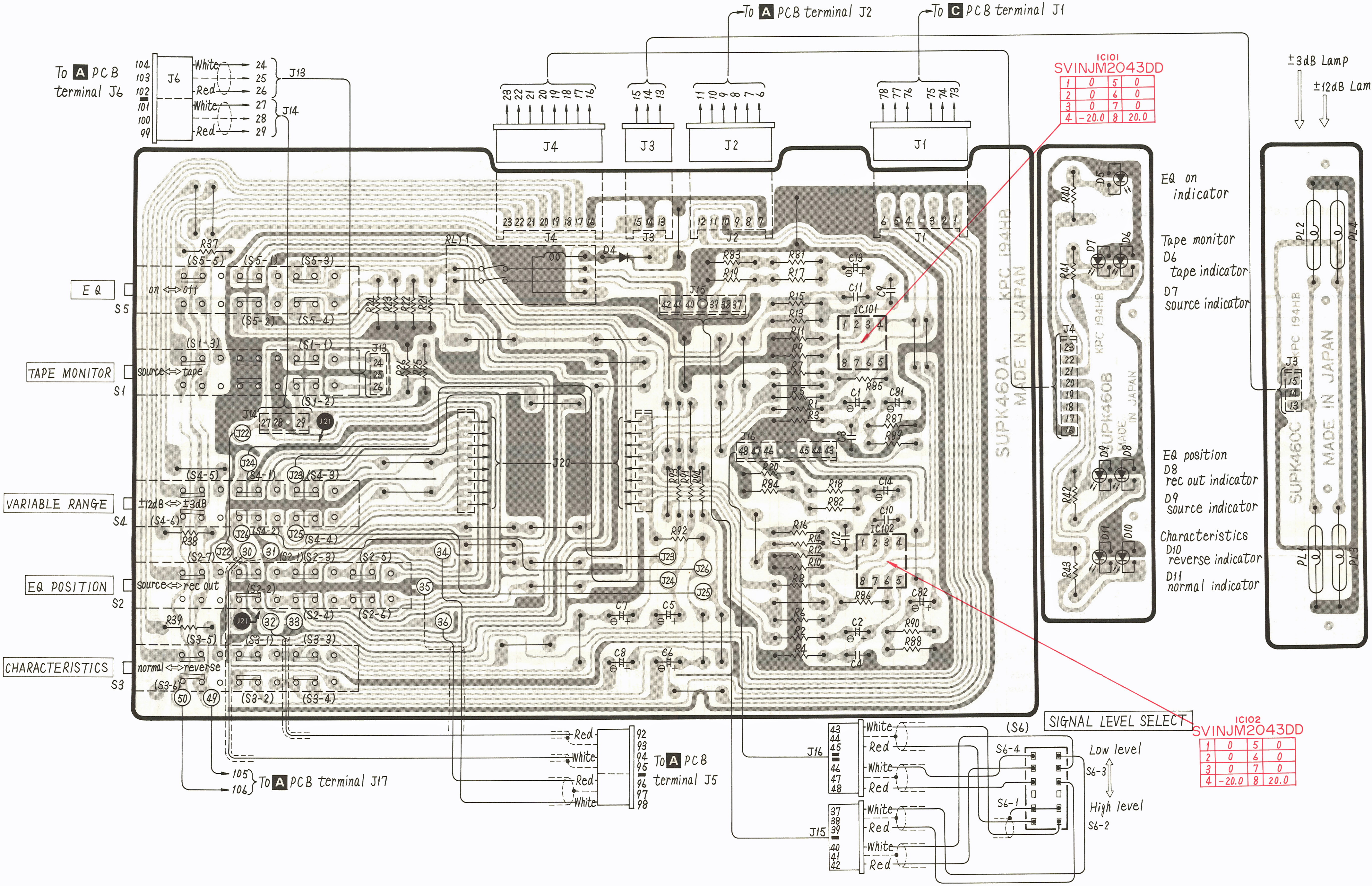
Right and Left Channel 33 Band Level Control

▨ Ground (Earth) lines


J11
J9
J7
60 59 58 57 56 55
54 53 52 51 50 49
36 35 34 33 32 31
30 29 28 27 26 25
12 11 10 9 8 7
6 5 4 3 2 1
VR65 25KHz
VR63 20KHz
VR61 16KHz
VR59 12.5KHz
VR57 10KHz
VR55 8KHz
VR53 6.3KHz
VR51 5KHz
VR49 4KHz
VR47 3.15KHz
VR45 2.5KHz
VR43 2KHz
VR41 1.6KHz
VR39 1.25KHz
VR37 1KHz
VR35 800Hz
VR33 630Hz
VR31 500Hz
VR29 400Hz
VR27 315Hz
VR25 250Hz
VR23 200Hz
VR21 160Hz
VR19 125Hz
VR17 100Hz
VR15 80Hz
VR13 63Hz
VR11 50Hz
VR9 40Hz
VR7 31.5Hz
VR5 25Hz
VR3 20Hz
VR1 16Hz
12 (+dB)
10
8
6
4
2
0
2
4
6
8
10
12 (−dB)
left
78
77
76
75
74
73
To B PCB terminal J1
VR66 25KHz
VR64 20KHz
VR62 16KHz
VR60 12.5KHz
VR58 10KHz
VR56 8KHz
VR54 6.3KHz
VR52 5KHz
VR50 4KHz
VR48 3.15KHz
VR46 2.5KHz
VR44 2KHz
VR42 1.6KHz
VR40 1.25KHz
VR38 1KHz
VR36 800Hz
VR34 630Hz
VR32 500Hz
VR30 400Hz
VR28 315Hz
VR26 250Hz
VR24 200Hz
VR22 160Hz
VR20 125Hz
VR18 100Hz
VR16 80Hz
VR14 63Hz
VR12 50Hz
VR10 40Hz
VR8 31.5Hz
VR6 25Hz
VR4 20Hz
VR2 16Hz
12 (+dB)
10
8
6
4
2
0
2
4
6
8
10
12 (−dB)
right
72 71 70 69 68 67
66 65 64 63 62 61
48 47 46 45 44 43
42 41 40 39 38 37
24 23 22 21 20 19
18 17 16 15 14 13
J12
J10
J8

B P.C.B.

Equalization – Position Selector Switch
Band Pass Filter Buffer and Operation Amplifier


To A PCB terminal J2
To C PCB terminal J1
To A PCB terminal J6
J6
White
Red
White
Red
J13
J14
J4
J3
J2
J1
EQ
S5
on ⇔ off
TAPE MONITOR
S1
source ⇔ tape
VARIABLE RANGE
S4
±12dB ⇔ ±3dB
EQ POSITION
S2
source ⇔ rec out
CHARACTERISTICS
S3
normal ⇔ reverse
RLY1
D4
J15
J16
J20
IC101
IC102
SUPK460A
KPC 194HB
MADE IN JAPAN
SUPK460B
SUPK460C
EQ on indicator
D5
Tape monitor
D6 tape indicator
D7 source indicator
EQ position
D8 rec out indicator
D9 source indicator
Characteristics
D10 reverse indicator
D11 normal indicator
±3dB Lamp
±12dB Lamp
PL1
PL2
PL3
PL4
To A PCB terminal J17
To A PCB terminal J5
SIGNAL LEVEL SELECT
(S6)
S6-4
S6-3
S6-2
S6-1
Low level
High level

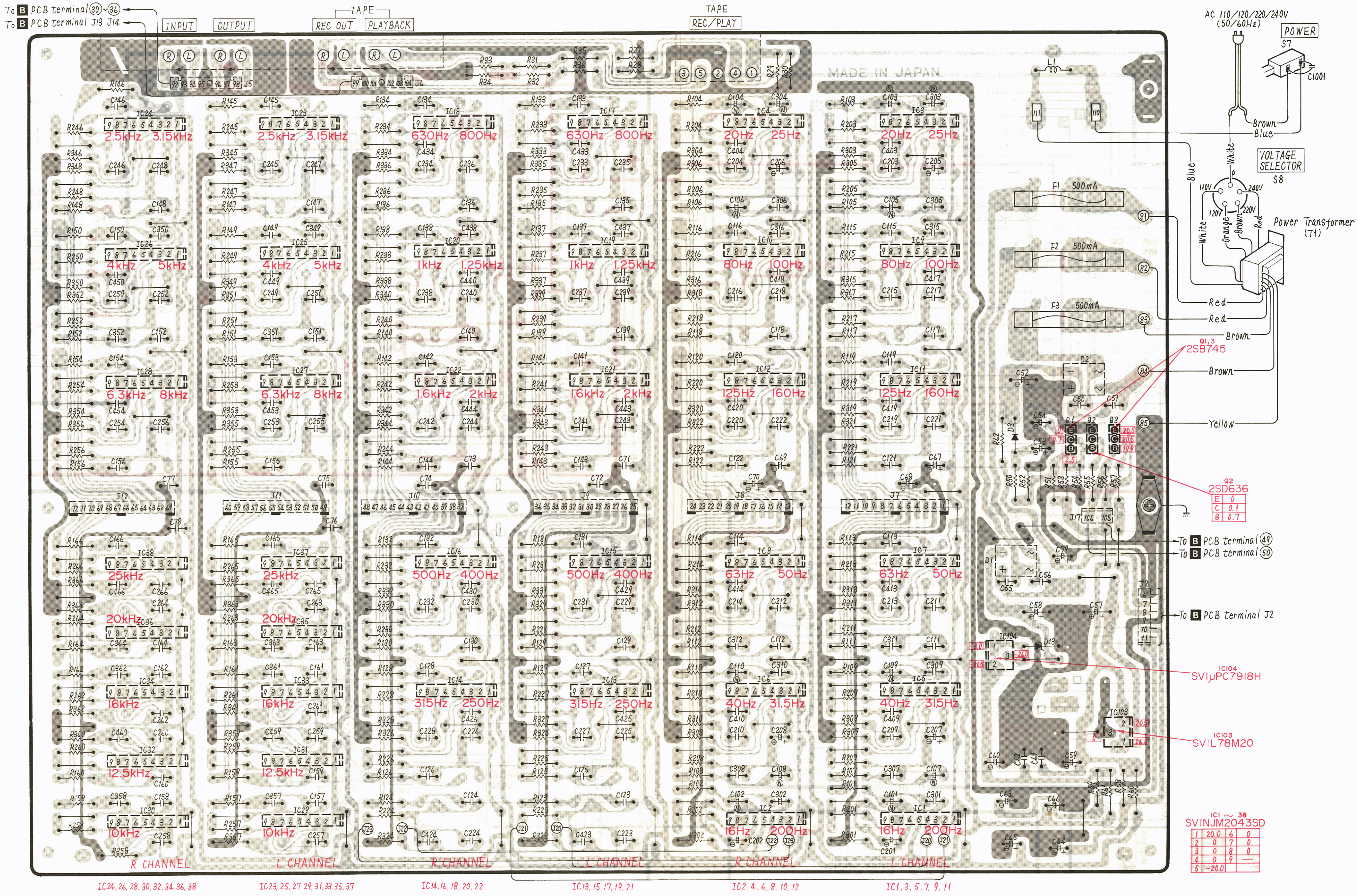
IC101
SVINJM2043DD

1	0	5	0
2	0	6	0
3	0	7	0
4	−20.0	8	20.0

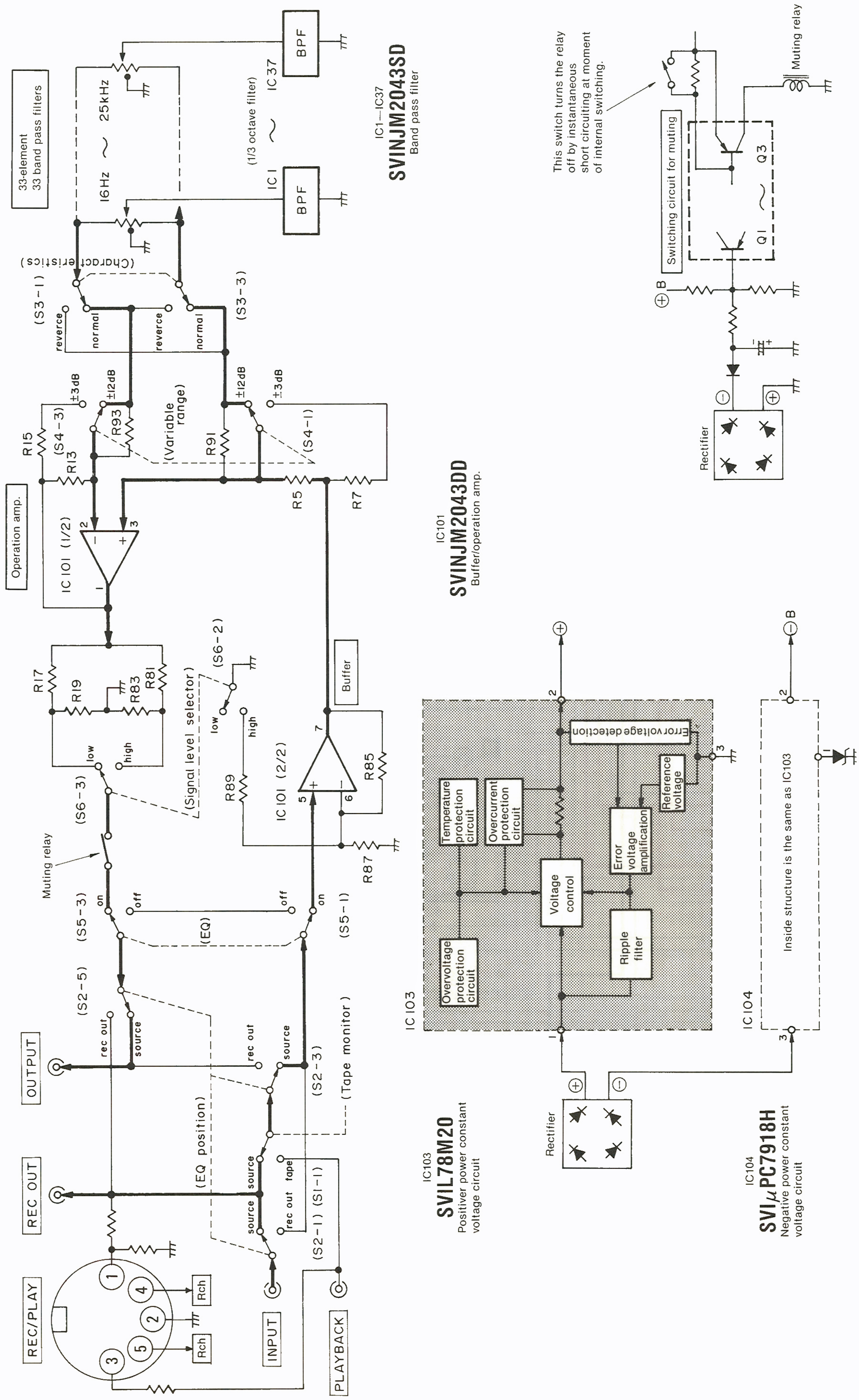
IC102
SVINJM2043DD

1	0	5	0
2	0	6	0
3	0	7	0
4	−20.0	8	20.0

A P.C.B. Right and Left Channel Band Pass Filter and Power Supply


To B PCB terminal ㉚~㊱
To B PCB terminal J13, J14
INPUT
OUTPUT
TAPE
REC OUT
PLAYBACK
TAPE
REC/PLAY
MADE IN JAPAN
2.5kHz 3.15kHz
630Hz 800Hz
20Hz 25Hz
4kHz 5kHz
1kHz 1.25kHz
80Hz 100Hz
6.3kHz 8kHz
1.6kHz 2kHz
125Hz 160Hz
25kHz
20kHz
500Hz 400Hz
63Hz 50Hz
16kHz
315Hz 250Hz
40Hz 31.5Hz
12.5kHz
10kHz
16Hz 200Hz
R CHANNEL
L CHANNEL
IC24, 26, 28, 30, 32, 34, 36, 38
IC23, 25, 27, 29, 31, 33, 35, 37
IC14, 16, 18, 20, 22
IC13, 15, 17, 19, 21
IC2, 4, 6, 8, 10, 12
IC1, 3, 5, 7, 9, 11
AC 110/120/220/240V (50/60Hz)
POWER S7
C1001
Brown
Blue
White
VOLTAGE SELECTOR S8
110V
120V
220V
240V
Orange
Red
Power Transformer (T1)
F1 500mA
F2 500mA
F3 500mA
Q1,3 2SB745
Yellow
Q2 2SD636
E 0
C 0.1
B 0.7
To B PCB terminal ㊾
To B PCB terminal ㊿
To B PCB terminal J2
IC104 SVIμPC7918H
IC103 SVIL78M20
IC1 ~ 38 SVINJM2043SD
1 20.0
2 0
3 0
4 0
5 -20.0
6 0
7 0
8 0
9 —

■ BLOCK DIAGRAM


33-element
33 band pass filters
16Hz ~ 25kHz
(1/3 octave filter)
IC 1
IC 37
BPF
BPF
IC1—IC37
SVINJM2043SD
Band pass filter
(Characteristics)
(S3-1)
(S3-3)
reverce
normal
reverce
normal
±3dB
±12dB
±12dB
±3dB
R15
R13
(S4-3)
R93
(Variable range)
R91
(S4-1)
R5
R7
Operation amp.
IC 101 (1/2)
IC101
SVINJM2043DD
Buffer/operation amp.
R17
R19
R83
R81
low
high
(S6-3)
(Signal level selector)
(S6-2)
low
high
R89
IC 101 (2/2)
R85
R87
Buffer
Muting relay
(S5-3)
on
off
(EQ)
off
on
(S5-1)
(S2-5)
rec out
source
rec out
source
(S2-3)
(Tape monitor)
(EQ position)
source
source
rec out
tape
(S2-1) (S1-1)
OUTPUT
REC OUT
REC/PLAY
INPUT
PLAYBACK
Rch
Rch
1
2
3
4
5
This switch turns the relay off by instantaneous short circuiting at moment of internal switching.
Muting relay
Switching circuit for muting
Q3 ~ Q1
⊕B
Rectifier
IC 103
Error voltage detection
Reference voltage
Error voltage amplification
Temperature protection circuit
Overcurrent protection circuit
Voltage control
Ripple filter
Overvoltage protection circuit
IC 104
Inside structure is the same as IC103
⊕
⊖B
Rectifier
IC103
SVIL78M20
Positiver power constant voltage circuit
IC104
SVIμPC7918H
Negative power constant voltage circuit

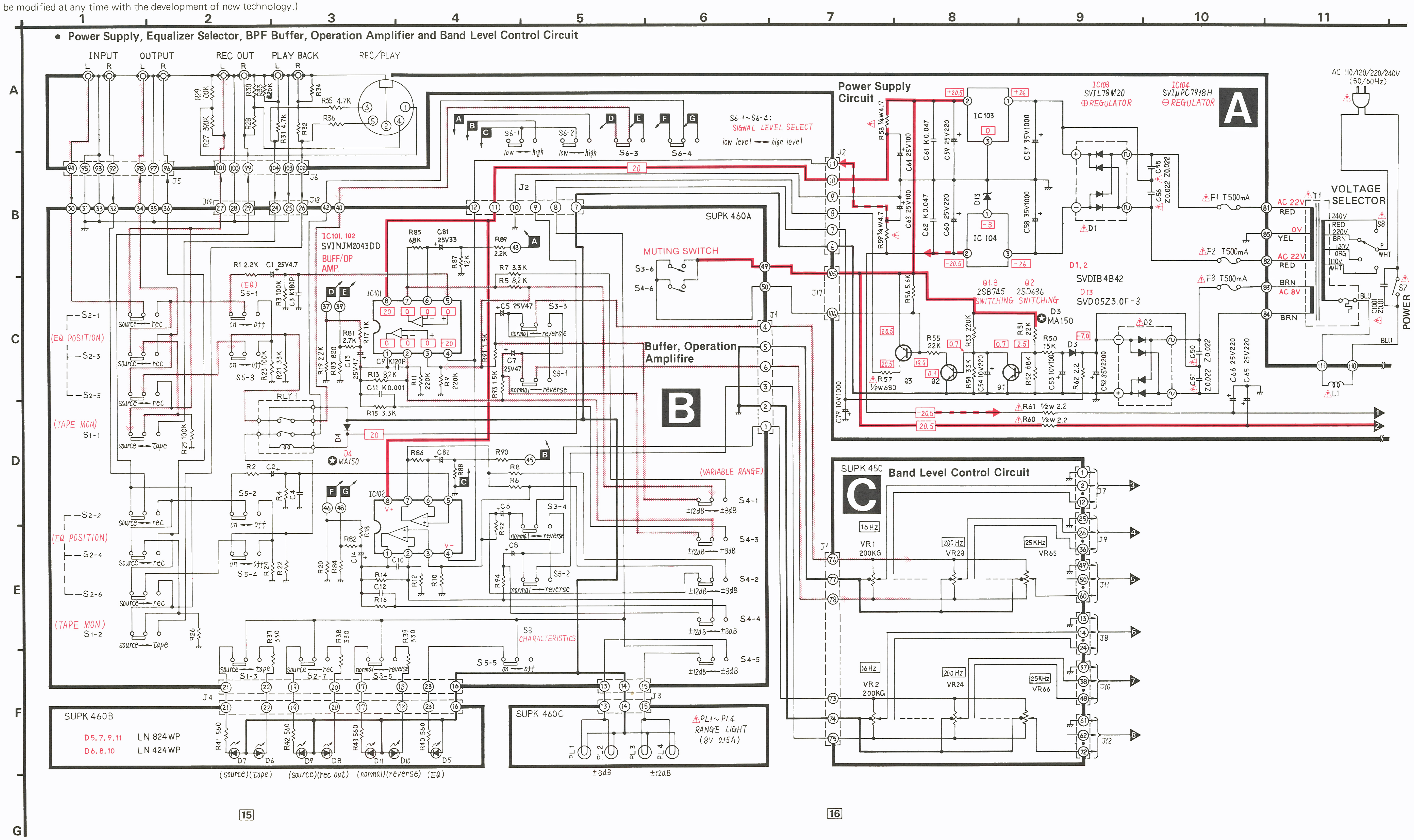
SH-8065

■ SCHEMATIC DIAGRAM Ⓐ (This schematic diagram may be modified at any time with the development of new technology.)

Notes:

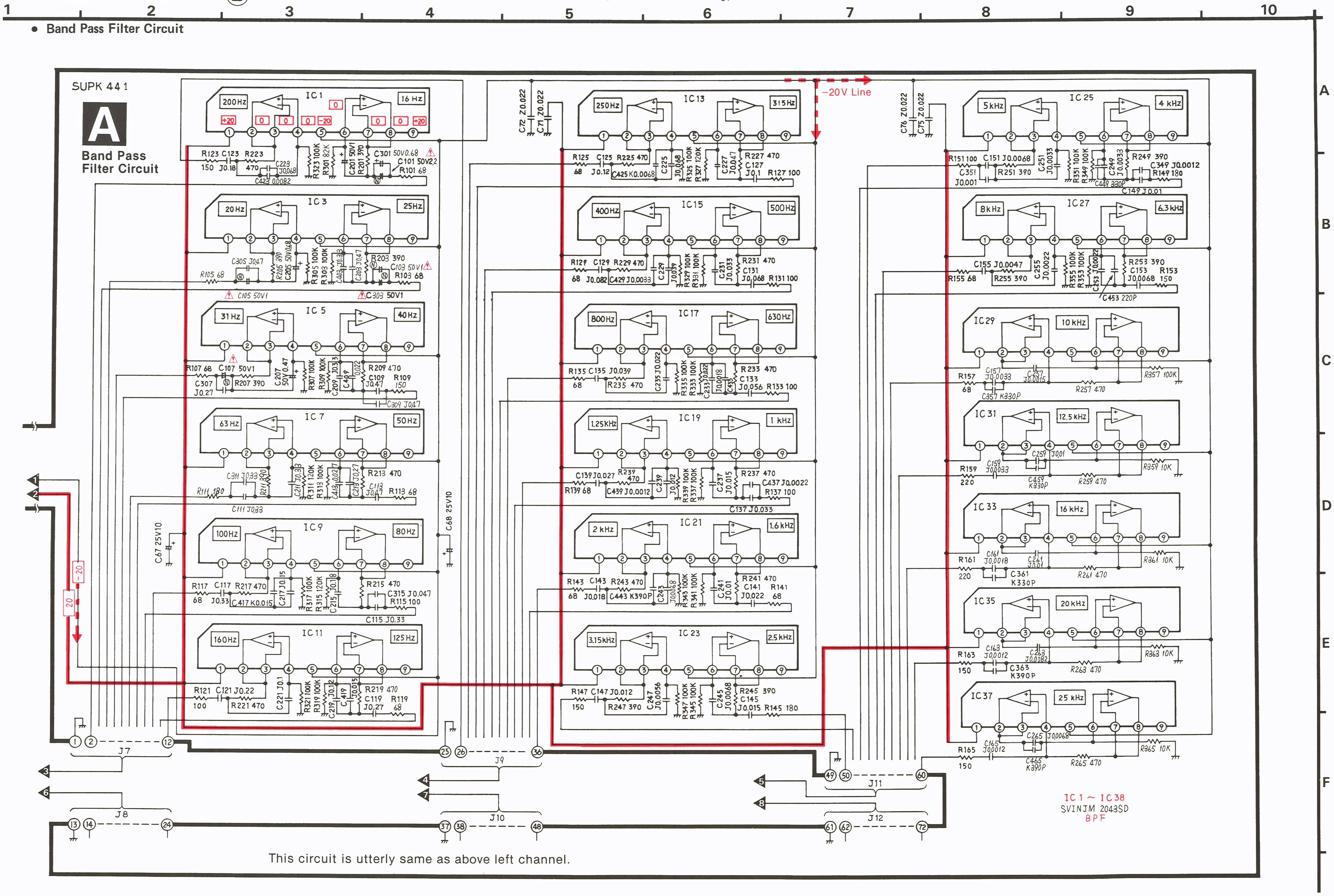
* The part No. of transistors, IC and diodes mentioned in schematic diagram stand for production Part No.
Regarding the Part No. without ✪ mark, the production Part No. are different from the replacement part No.
Therefore, when placing an order for replacement parts, please use the Part No. in the replacement parts list.

1. **S1-1 ～ S1-3** : Tape monitor switch in "**source**" position.
   source ←→ tape
2. **S2-1 ～ S2-7** : Equalization - position selector switch in "**source**" position.
   source ←→ rec out
3. **S3-1 ～ S3-6** : Characteristics selector switch in "**normal**" position.
   normal ←→ reverce
4. **S4-1 ～ S4-6** : Variable - range selector switch in "**± 12 dB**" position.
   ± 12 dB ←→ ± 3 dB
5. **S5-1 ～ S5-5** : Equalization switch in "**on**" position.
6. **S6-1 ～ S6-4** : Signal level selector switch in "**low level**" position.
   low level (150mV) ←→ high level (1V)
7. **S7** : Power switch in "**on**" position.
8. **S8** : Voltage selector switch in "**220V**" position
   110V ←→ 120V ←→ 220V ←→ 240V
9. S3-6 and S4-6 are muting switches for changeover.
   These switches momentarily turns on the relay off.
10. The circuit is same for both L and R channels.
    For the resistance value and Capacity of R channel Op amp. (IC102), refer to the L channel (IC101).
11. ▭ Indicated voltage values are the standare values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
12. ░░░▶ Signal lines of left channel.
13. ▬▬ Positive (⊕ B) voltage lines. ■■■■▶ Negative (⊖ B) voltage lines
14. Important safety notice:
    Components identified by ⚠ mark have special characteristics important for safety.
    When replacing any of these components, use only manufacturer's specified parts.


• Power Supply, Equalizer Selector, BPF Buffer, Operation Amplifier and Band Level Control Circuit
INPUT
OUTPUT
REC OUT
PLAY BACK
REC/PLAY
Power Supply Circuit
A
IC103 SVIL78M20 ⊕REGULATOR
IC104 SVIμPC7918H ⊖REGULATOR
S6-1～S6-4: SIGNAL LEVEL SELECT low level ←→ high level
VOLTAGE SELECTOR
AC 110/120/220/240V (50/60Hz)
POWER S7
SUPK 460A
MUTING SWITCH
IC101, 102 SVINJM2043DD BUFF/OP AMP.
Buffer, Operation Amplifire
B
RLY1
D4 ✪MA150
D1, 2 SVDIB4B42
D13 SVD05Z3.0F-3
D3 ✪MA150
Q1, 3 2SB745 Q2 2SD636 SWITCHING SWITCHING
(EQ POSITION)
(TAPE MON)
(VARIABLE RANGE)
S3 CHARACTERISTICS
SUPK 450 Band Level Control Circuit
C
16Hz VR1 200KG
200Hz VR23
25KHz VR65
16Hz VR2 200KG
200Hz VR24
25KHz VR66
SUPK 460B
D5, 7, 9, 11 LN824WP
D6, 8, 10 LN424WP
(source) (tape) (source) (rec out) (normal) (reverse) (EQ)
SUPK 460C
PL1～PL4 RANGE LIGHT (8V 0.15A)
±3dB ±12dB
1 2 3 4 5 6 7 8 9 10 11
A B C D E F G

■ SCHEMATIC DIAGRAM Ⓑ (This schematic diagram may be modified at any time with the development of new technology.)

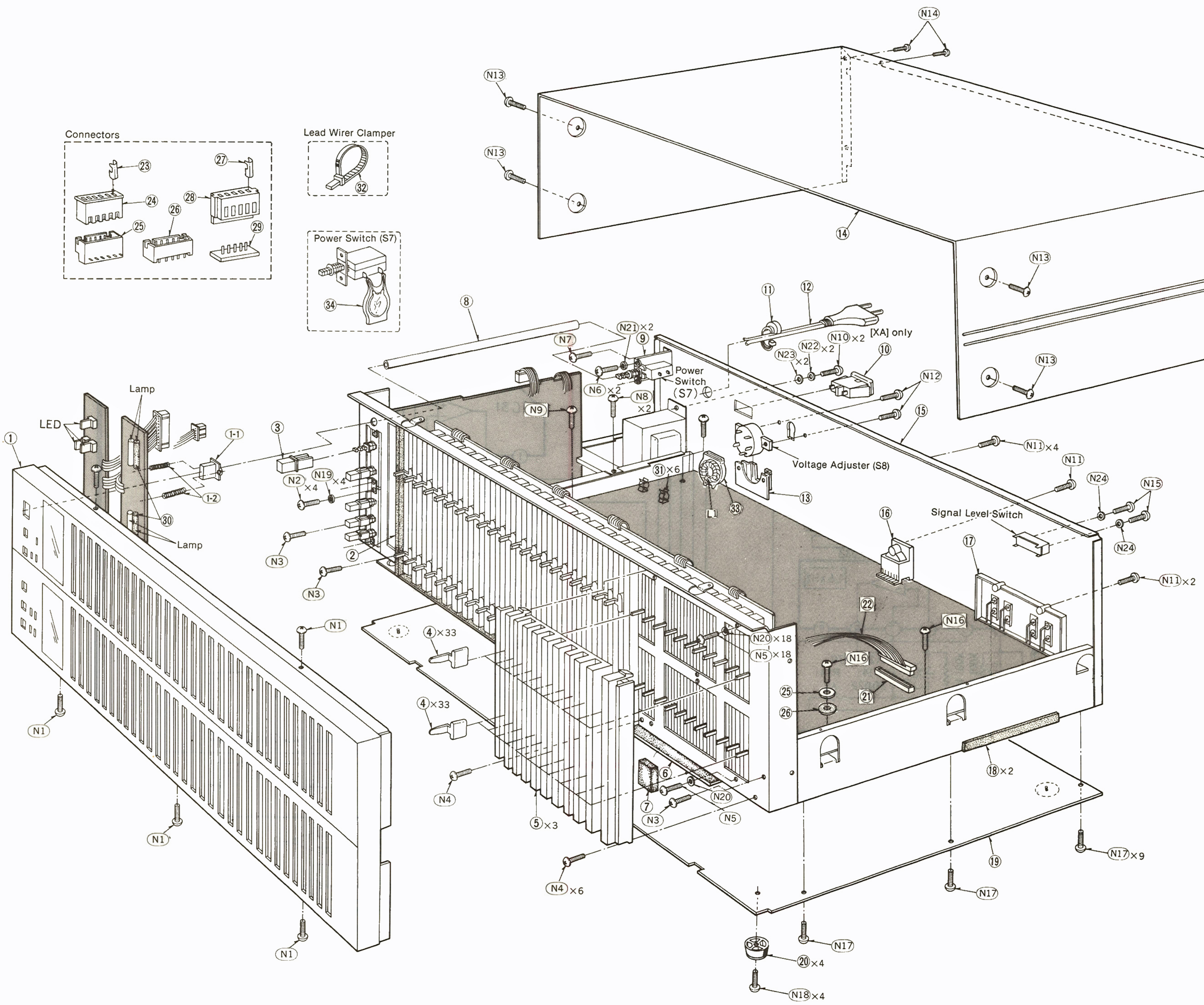
- Band Pass Filter Circuit


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
SUPK 441
A
Band Pass Filter Circuit
IC1
200Hz
16Hz
IC3
20Hz
25Hz
IC5
31Hz
40Hz
IC7
63Hz
50Hz
IC9
100Hz
80Hz
IC11
160Hz
125Hz
IC13
250Hz
315Hz
IC15
400Hz
500Hz
IC17
800Hz
630Hz
IC19
1.25kHz
1kHz
IC21
2kHz
1.6kHz
IC23
3.15kHz
2.5kHz
IC25
5kHz
4kHz
IC27
8kHz
6.3kHz
IC29
10kHz
IC31
12.5kHz
IC33
16kHz
IC35
20kHz
IC37
25kHz
−20V Line
+20
0
−20
C72 Z0.022
C71 Z0.022
C76 Z0.022
C75 Z0.022
C67 25V10
C68 25V10
J7
J8
J9
J10
J11
J12
IC1 ~ IC38
SVINJM 2043SD
BPF
This circuit is utterly same as above left channel.

■ EXPLODED VIEW

Areas

- [EX] is available in Switzerland and Scandinavia.
- [EK] is available in United Kingdom.
- [EF] is available in France.
- [XA] is available in Southeast Asia, Oceania, Africa, Middle Near East and Central South America.



■ REPLACEMENT PARTS LIST......Cabinet, Chassis and Packing Parts

Notes:

1. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
2. Important safety notice:
   Components indentified by ⚠ make have special characteristics importanf for safety. When replacing any of these components, use only manufacturer's specified parts.
3. Bracketed indications Ref. No. columns specify the area. Parts without these indications can be used for all areas.
4. The **"S"** mark is service standard parts and may differ from production parts.
5. 🅺 -marked parts are used for black type only, while ○-marked parts are for silver type only.
6. Parts other than 🅺 and ○-marked are used for both black and silver types.
7. The parenthesized numbers in the columns of description stand for the quantity per set.

Black type model No. : SH-8065 (K)

Ref. No.	Part No.	Description
CABINET and CHASSIS PARTS		
1 🅺	SYWK140	Front Panel Ass'y (Black), W/Power Button (1)
1 ○	SYWK150	Front Panel Ass'y (Silver) W/Power Button (1)
1–1	SBC435	Button, Power (1)
1–2	SUS159	Spring, Power Button (2)
2	SHGK457	Rubber (1)
3	SBC367	Button, Switches (5)
4	SBDK3	Knob, Band Level Control (6)
5	SGXK42–1	Ornament, Band Level Control Volume (3)
6	SHSK149–1	Rubber (1)
7	SHG6051	Rubber, Printed Circuit Board (1)
8	SUBK5	Coupling Rod (1)
9	SUWK260	Bracket, Power Switch (1)
10 [XA] ⚠ only	SJS9221–1	Socket, AC Outlet (1)
11	SHR127	Bushing, AC Cord (1)
11 [EK] only	SHR129	Bushing, AC Cord (1)
12 **S** ⚠	SJA88	AC Cord (1)
12 [EK] ⚠ only	RJA45YA	AC Cord (1)
13	SMN1635	Bracket, Switch (1)
14 🅺	SKCH8065KN	Cabinet (Black) (1)
14 ○	SKCH8065N	Cabinet (Silver) (1)
15 [EX]	SGP130–1A	Rear Panel (1)
15 [XA]	SGP130–2A	Rear Panel (1)
15 [EF,EK]	SGPH8065H	Rear Panel (1)
16	SJS6513	Socket, DIN (1)
17	SJF3049–1N	Terminal, Input & Output (1)
18	SHGK458	Rubber, Side (2)
19	SKUK100	Bottom Board (1)
20	SKL227–2	Foot, Set (4)
21	SJT3013	Connector (12 Pin) (6)
22	SWKKH8065–10	Lead Ass'y (6)
23	SJT783	Terminal, Socket (38)
24	SJS5331	Socket (3 Pin) (2)
24	SJS5629	Socket (6 Pin) (1)
24	SJS5715	Socket (7 Pin) (2)
24	SJS5811	Socket (8 Pin) (2)
25	SJT3321	Connector (3 Pin) (1)
25	SJT3613	Connector (6 Pin) (1)
25	SJT3711	Connector (7 Pin) (1)
25	SJT3811	Connector (8 Pin) (1)
26	SJT3319	Connector (3 Pin) (1)
26	SJT3709	Connector (7 Pin) (1)
26	SJT3809	Connector (8 Pin) (1)
27	SJT779	Terminal, Socket (12)
28	SJS5703	Socket (7 Pin) (1)
28	SJS5803	Socket (8 Pin) (1)
29	SJT3707	Connector (7 Pin) (1)
29	SJT3805	Connector (8 Pin) (1)
30	SDUK4	Tube, Lamp (2)
31	SJT347	Clip, Fuse (6)
32	SHR301	Clamper, Lead Wire (9)
33	SMXK12–2	Cover, Coil (1)
34	SMXA65	Cover, Capacitor (1)
SCREWS		
N1	XTS3+6BFZ	Tapping, ⊕ 3 x 6 (5)
N2 **S**	XSN3+6S	⊕ 3 x 6 (4)
N3 **S**	XTB3+8BFZ	Tapping, ⊕ 3 x 8 (3)
N4 **S**	XTS3+8BFZ	Tapping, ⊕ 3 x 8 (6)
N5 **S**	XSN2+4BV	⊕ 2 x 4 (18)
N6 **S**	XSN3+6S	⊕ 3 x 6 (2)
N7 **S**	XTB3+8BFZ	Tapping, ⊕ 3 x 8 (1)
N8 **S**	XTB3+8BFZ	Tapping, ⊕ 3 x 8 (2)
N9 **S**	XTBS3+8BFZ1	Tapping with Detent ⊕ 3 x 8 (2)
N10 **S**	XSN4+10BVS	⊕ 4 x 10 (2)
N11 **S**	XTB3+8BFZ	Tapping, ⊕ 3 x 8 (7)
N12 **S**	XTB3+16BFZ	Tapping, ⊕ 3 x 16 (2)
N13 **S** 🅺	XTB4+8BFZ	Tapping, ⊕ 4 x 8 (Black) (4)
N13 **S** ○	XTB4+8BFN	Tapping, ⊕ 4 x 8 (Silver) (4)
N14 **S** 🅺	XTB3+8BFZ	Tapping, ⊕ 3 x 8 (Black) (5)
N14 **S** ○	XTB3+8BFN	Tapping, ⊕ 3 x 8 (Silver) (5)
N15 **S**	XSN26+6BV	⊕ 2.6 x 6 (2)
N16 **S**	XTB3+8BFZ	Tapping, ⊕ 3 x 8 (2)
N17 **S**	XTB3+8BFN	Tapping, ⊕ 3 x 8 (9)
N18 **S**	XTB3+10BFZ	Tapping, ⊕ 3 x 10 (4)
WASHERS		
N19 **S**	XWA3B	Spring, $\phi3$ (4)
N20 **S**	XWA2BFZ	Spring, $\phi2$ (18)
N21 **S**	XWA3B	Spring, $\phi3$ (2)
N22 **S**	XWA4BFZ	Spring, $\phi4$ (2)
N23 **S**	XWG4FZ	Plain, $\phi4$ (2)
N24 **S**	XWA26BFZ	Spring, $\phi2.6$ (2)
N25	XWE3E10	Plain, $\phi3$ (1)
ACCESSORIES		
A1	SJP2129-5	Pin Cord (2)
A2 [XA] ⚠ only	SJP5213–1	Plug Adapter, Power Source (1)
A3	SQFK10005	Instructions Book (1)
A3 [XA] only	SQFK10004	Instructions Book (1)
A3–1	SQXK50007	Chart, Frequency Level Memory (3)
PACKING PARTS		
P1[EF] only	SPGK82	Carton Box (1)
P1	SPGK83	Carton Box (1)
P1[XA] only	SPGK84	Carton Box (1)
P2 ○	SGK1411	Label (Silver) (2)
P3	SPSK36	Pab, Side (2)
P4 🅺	SPP651	Polyethylene Bag (1)
P4 ○	SPP703	Polyethylene Bag (1)
P5	SPJ15	Polyethylene Bag, AC Cord (1)

Printed in Japan
82036100ⒽTK
82063000

ORDER NO. SD82072255C2

Service Manual

Stereo Graphic Equalizer

SH-8065

[EB], [EGA]

SH-8065(K)

[EB], [EGA]

- **The cabinet and front panel are available in black color and silver types.**
- **The black type model is provided with (K) in the Service Manual.**

Areas

- [EB] is available in Belgium.
- [EGA] is available in F.R. Germany.

- **Please use this manual together with the service manual for Model No. SH-8065/(K) [EX, EK, EF and XA areas], Order No. SD82032136C8.**
- **Mentioned in this parts list are only those changed in Model No. SH-8065/(K) for destination [EX] area.**

CHANGES

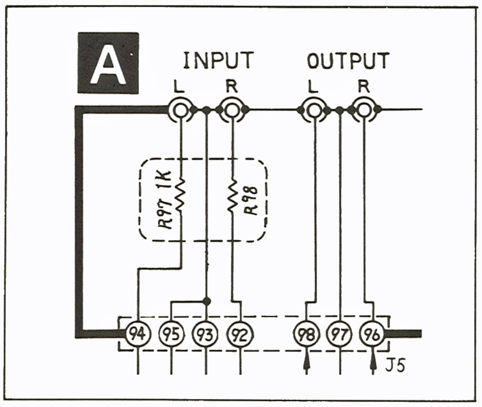
■ RESISTORS

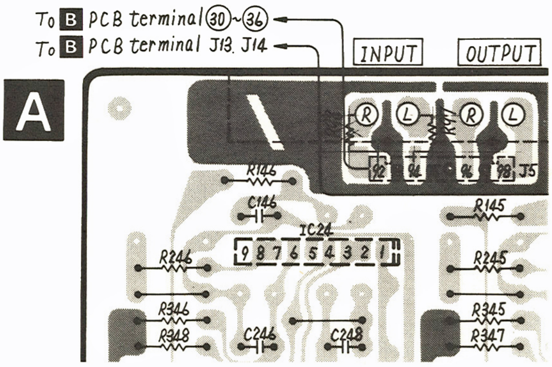
Ref. No.	Change of Part No.		Description
	SH-8065/(K) [EX] →	**SH-8065/(K) [EB, EGA]**	
RESISTORS			
R97, 98	Addition	ERD25FJ102 [EGA] only	Carbon, 1kΩ, 1/4W, ±5%

■ CHANGE OF CIRCUIT

- **Input terminal circuit: [EGA] area only**

( ) **Additional parts**


A
INPUT
OUTPUT
L
R
L
R
R97 1K
R98
94
95
93
92
98
97
96
J5


To B PCB terminal ㉚~㊱
To B PCB terminal J13, J14
INPUT
OUTPUT
A
R
L
R
L
R98
R97
92
94
96
98
J5
R146
C146
IC24
9 8 7 6 5 4 3 2 1
R145
R246
R245
R346
R348
C246
C248
R345
R347

Technics

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan
Printed in Japan
82072500 Ⓗ TK

ORDER NO. SD82032136C8-A

Stereo Graphic Equalizer SH-8065/SH-8065(K)

Note: This booklet contains the specifications for SH-8065, written in Germany French and Spanish.
File this manual together with the SH-8065 service manual (Order No. SD82032136C8).

DEUTSCH

■ TECHNISCHE DATEN

(Spezifikationen Können infolge von Verbesserungen ohne Ankündigung geändert werden.)

(DIN 45 500)

Frequenzgang (mittelstellung):	5 Hz~100 kHz, −1 dB
Maximalausgangsspannung:	8 V (1 kHz, THD 0,01%)
Nennausgangsspannung:	1 V
Nennklirrfaktor:	0,0025% (20 Hz~20 kHz)
Eingangsspannung:	1 V
Geräuschabstand:	100 dB (110 dB, IHF, A)
Maximaleingangsspannung:	8 V (1 kHz)
Eingangsimpedanz:	47 kΩ
Ausgangsimpedanz:	600Ω
Verstärkung:	0±1 dB
Frequenzgangregler:	+12 dB~−12 dB, +3 dB~−3 dB (33 Regler, stufenlos verstellbar)
Eingangssignalschalter:	150 mV/1 V
Mittenfrequenzen:	16 Hz, 20 Hz, 25 Hz, 31,5 Hz, 40 Hz, 50 Hz, 63 Hz, 80 Hz, 100 Hz, 125 Hz, 160 Hz, 200 Hz, 250 Hz, 315 Hz, 400 Hz, 500 Hz, 630 Hz, 800 Hz, 1 kHz, 1,25 kHz, 1,6 kHz, 2 kHz, 2,5 kHz, 3,15 kHz, 4 kHz, 5 kHz, 6,3 kHz, 8 kHz, 10 kHz, 12,5 kHz, 16 kHz, 20 kHz, 25 kHz

ALLGEMEINE DATEN

Stromversorgung:	Wechselstrom, 110 V/120 V/220 V/240 V, 50 Hz/60 Hz
Leistungsaufnahme:	29 W
Abmessungen (H×B×T):	153×430×330 mm (6-1/32''×16-15/16''×13'')
Gewicht:	6,6 kg (14,6 lbs)

FRANÇAIS

■ CARACTERISTIQUES

(Sujet á changement sans prearis.)

(DIN 45 500)

Courbe de réponse (position centrale):	5 Hz~100 kHz, −1 dB
Tension de sortie maximale:	8 V (1 kHz, THD 0.01%)
Tension de sortie nominale:	1 V
Distortion harmonique totale:	0.0025% (20 Hz~20 kHz)
Sensibilité d'entrée:	1 V
Signal/Bruit:	100 dB (110 dB, IHF' A)
Tension d'entrée maximale:	8 V (1 kHz)
Impédance d'entrée:	47 kΩ
Impédance de sortie:	600Ω
Gain:	0±1 dB
Commandes de niveau de gamme:	+12 dB~−12 dB, +3 dB~−3 dB (33 éléments, continuellement variables)
Sélecteur de niveau de signal:	150 mV/1 V
Fréquences charnières:	16 Hz, 20 Hz, 25 Hz, 31,5 Hz, 40 Hz, 50 Hz, 63 Hz, 80 Hz, 100 Hz, 125 Hz, 160 Hz, 200 Hz, 250 Hz, 315 Hz, 400 Hz, 500 Hz, 630 Hz, 800 Hz, 1 kHz, 1,25 kHz, 1,6 kHz, 2 kHz, 2,5 kHz, 3,15 kHz, 4 kHz, 5 kHz, 6,3 kHz, 8 kHz, 10 kHz, 12,5 kHz, 16 kHz, 20 kHz, 25 kHz

GENERALITES

Alimentation:	CA. 110 V/120 V/220 V/240 V, 50 Hz/60 Hz
Consommation:	29 W
Dimensions (h×l×pr) mm:	153×430×330 mm (6-1/32''×16-15/16''×13'')
Poids:	6.6 kg (14,6 lbs)

ESPAÑOL

ESPECIFICACIONES

(Estas especificaciones están sujetas a cualquier cambio sin previo eviso.)

(DIN 45 500)

Respuesta de frecuencia (posición central):	5 Hz~100 kHz, −1 dB
Tensión de salida máxima:	8 V (1 kHz, THD 0.01%)
Tensión de salida de régimen:	1 V
Distorsión armónica total nominal:	0,0025% (20 Hz~20 kHz)
Sensibilidad de entrada:	1 V
Relación de señal ruido:	100 dB (110 dB, IHF' A)
Tensión de entrada máxima:	8 V (1 kHz)
Impedancia de entrada:	47 kΩ
Impedancia de salida:	600Ω
Ganancia:	0±1 dB
Controles de nivel de banda:	+12 dB~−12 dB, +3 dB~−3 dB (33 elementos, continuamente variables)
Selector de nivel de la señal:	150 mV/1 V
Frecuencia central:	16 Hz, 20 Hz, 25 Hz, 31,5 Hz, 40 Hz, 50 Hz, 63 Hz, 80 Hz, 100 Hz, 125 Hz, 160 Hz, 200 Hz, 250 Hz, 315 Hz, 400 Hz, 500 Hz, 630 Hz, 800 Hz, 1 kHz, 1,25 kHz, 1,6 kHz, 2 kHz, 2,5 kHz, 3,15 kHz, 4 kHz, 5 kHz, 6,3 kHz, 8 kHz, 10 kHz, 12,5 kHz, 16 kHz, 20 kHz, 25 kHz

EN GENERAL

Alimentación de corriente:	C.A. de 110 V/120 V/220 V/240 V, 50 Hz/60 Hz
Consumo de corriente:	29 W
Dimensiones (alto×ancho×prof.):	153×430×330 mm (6-1/32"×16-15/16"×13")
Peso:	6,6 kg (14,6 lbs)

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